UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,793	06/28/2001	Robert D. Bushey	10004829-1	8285

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EXAMINER
SINGH, DALIP K

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/896,793	BUSHEY, ROBERT D.
	Examiner	**Art Unit**	
	Dalip K Singh	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 January 2002</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.　　　The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.　　　Claims 1-6, 9-15, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 5,943,064 to Hong in view of U.S. Patent No. 5,861,893 to

Sturgess.

　　　　a.　　　Regarding claim 1, Hong **discloses** an apparatus and method for

processing and displaying multiply types of graphics data for display comprising:

a graphics pipeline (graphics processing engine and graphics display engine 50,

Figure 3) and a bit map image pipeline (video display engine 44) including a

plurality of stages (...the video display engine may also comprise a

horizontal/vertical scaling and color space conversion means...col. 7, lines 65-67;

col. 8, lines 1-17) configured to process a bit-mapped image, and a selectively

configurable interconnection matrix defining an image path for providing

selected outputs (...the graphics pseudo-pixels output from attribute controller

233...col. 10, lines 15-20) from one or more of said stages (...attribute controller

233 and the...graphics or video data output...from serializer 236...col. 10, lines 15-

20) of one of said pipelines (...graphics back-end pipeline 205...includes attribute

controller 233...col. 9, lines 25-29) to selected inputs of one or more of said stages

(...are provided to the inputs of color comparison circuitry 302...col. 10, lines 15-20) of the other of said pipelines (...video back-end pipeline 204...col. 10, lines 4-15). However, Hong **does not explicitly disclose** including a plurality of stages configured to process a graphic object. Sturgess **discloses** a plurality of stages configured to process a graphics object (...for a 3D pipeline, the...processing steps are...geometry transformations...lighting calculations...col. 4, lines 43-52). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the pipelines as taught by Hong with the plurality of stages as taught by Sturgess **because** it provides for an efficient processing of graphics object data.

b.   Regarding claim 2, Sturgess **discloses** plurality of stages different from the others (...geometry transformations, lighting calculations...col. 4, lines 43-48) and the selection from among the group of stages (...graphics commands that initiate and control these processing steps...are specified in a data structure called the execute buffer...col. 4, lines 48-52...3D graphics commands may specify...color space conversion...col. 7, lines 1-11).

c.   Regarding claim 3, Sturgess **discloses** wherein each of said second plurality of stages is different from the others (...2D pipeline block transfers data between memory locations...BLTs are processing steps in a 2D pipeline...hardware independence is accomplished through a device independent bitmap (DIB) engine 232...which provide...implementations for many of the processes in a typical 2D process pipeline...col. 3, lines 24-26; col. 5, lines 40-45)

and the selection from among the group of stages (...2D commands may include

...color conversion...palette operations...col. 7, lines 12-19).

d.   Regarding claim 4, Hong **discloses** an output stage connected to an

output from each of said pipelines (...both the video display engine 26 and the

graphics display engine 24 may transmit their pixel data...through common

switching circuitry 28...col. 6, lines 20-28).

e.   Regarding claim 5, Hong **discloses** for providing selected outputs (...the

graphics pseudo-pixels output from attribute controller 233...col. 10, lines 15-20)

from one or more of said stages (...attribute controller 233 and the...graphics or

video data output...from serializer 236...col. 10, lines 15-20) of one of said

pipelines (...graphics back-end pipeline 205...includes attribute controller

233...col. 9, lines 25-29) to selected inputs of one or more of said stages (...are

provided to the inputs of color comparison circuitry 302...col. 10, lines 15-20) of

the other of said pipelines (...video back-end pipeline 204...col. 10, lines 4-15).

Hong **does not explicitly disclose** routing outputs from one or more of said

second plurality of stages to a next one of said second plurality of stages to a

selected one of said first plurality of stages. However, it would have been obvious

to a person of ordinary skill in the art at the time invention was made to do so

because it provides for a flexible way to process data between the two pipelines.

f.   Regarding claim 6, Hong **does not disclose** wherein said graphics

pipeline is configured to receive graphics data including graphics identification

and location data and said bit-mapped image pipeline is configured to receive a

raster scanned image data representing pixel luminance information. Sturgess

discloses commands including a header that specifies a client (targeted

resource), an opcode (function to be performed), and a data type (col. 6, lines 64-

67; col. 7, lines 1-19). Therefore, it would have been obvious to a person of

ordinary skill in the art at the time invention was made to modify Hong with the

feature "header information, opcode and a data type" as taught by Sturgess

because it provides for efficient data handling between the two pipelines.

g.   Regarding claim 9, Hong **discloses** routing of one of said graphic object

and said bit-mapped image object between both said graphics and bit-mapped

image pipelines (...in a first mode...generate a first type of graphics pixel

data...second mode...video pixel data can be...captured...col. 3, lines 3-57; col. 4,

lines 44-67).

h.   Regarding claim 10, it is similar in scope to claim 1 above and is rejected

under the same rationale.

i.   Regarding claim 11, it is similar in scope to claim 2 above and is rejected

under the same rationale.

j.   Regarding claim 12, it is similar in scope to claim 3 above and is rejected

under the same rationale.

k.   Regarding claim 13, it is similar in scope to claim 4 above and is rejected

under the same rationale.

l.   Regarding claim 14, it is similar in scope to claim 5 above and is rejected

under the same rationale.

m.   Regarding claim 15, it is similar in scope to claim 6 above and is rejected

under the same rationale.

n.   Regarding claim 18, it is similar in scope to claim 9 above and is rejected

under the same rationale.

o.   Regarding claim 19, it is similar in scope to claim 4 above and is rejected

under the same rationale.

p.   Regarding claim 20, it is similar in scope to claims 2 and 3 above and is

rejected under the same rationale.

3.   Claim(s) 7, 8, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 5,943,064 to Hong in view of U.S. Patent No. 5,861,893 to

Sturgess, and further in view of U.S. Patent No. 5,598,525 to Nally et al.

a.   Regarding claim 7, Hong-Sturgess combination **does not disclose** a data

format converter configured to convert between a graphics data format and a

bit-mapped image data format. Nally et al. **discloses** conversion circuitry

allowing graphics data to be converted to a YUV format (col. 7, lines 45-57).

However, it would have been obvious to a person of ordinary skill in the art at the

time invention was made to modify Hong-Sturgess combination with Nally's

"conversion circuitry" **because** it provides a means to flexibly process data in

either graphics data or bit-mapped image data format.

b.   Regarding claim 8, Hong-Sturgess combination **does not disclose** an

image recognition stage configured to identify and encode graphic images within

said bit-mapped image. Nally et al. **discloses** encoding circuitry to identify and

encode graphic images within said bit-mapped image (...video front-end pipeline

200 also includes encoding circuitry 214...which is then written into the video

frame buffer space of frame buffer 105...col. 7, lines 45-50).

c.   Regarding claim 16, it is similar in scope to claim 7 above and is rejected under the same rationale.

d.   Regarding claim 17, it is similar in scope to claim 8 above and is rejected under the same rationale.

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6: 30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dks

June 15, 2003

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600